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10/762,866

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EXAMINER

RAYYAN, SUSAN F

ART UNIT

PAPER NUMBER

2167

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/762,866

Applicant(s)

TURPIN ET AL.

Examiner

Susan F. Rayyan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Election/Restrictions

1. Applicant's election with traverse of Group II, claims 11-20, 31-41, and 43 in the reply filed on September 21, 2006 is acknowledged. Applicant argues the search covering claim 41 of Group II would substantially cover independent claims 1,21,42 of Group I. Applicant's arguments are found persuasive and the Restriction Requirement has been withdrawn.

DETAILED ACTION

2. Claims 1-43 are pending.

Claim Objections

3. Claim 41 is objected to because of the following informalities: period in the middle of claim (line 11). Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5,9-15, 19-25, 31-35,39-43 are rejected under 35 U.S.C. 102(a) as being anticipated by US 2004/0083245 issued to Donald E. Beeler JR.

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As per claim 1 Beeler anticipates:

A method for imaging a file system in a partition comprising a plurality of allocation units (see paragraph 16), the method comprising:
copying each allocation unit occupied by a file of the file system to a locally-stored image file, wherein the locally-stored image file is within the same partition as the file system (paragraph 20, 79 as data replicated to a local file system of the source server and the replicated data is stored in a separate directory); and
adding a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system (paragraph 20, 91, and Figure 25, Reference Number 254, directories and files are copied to a separate directory which would include a directory map to access to the files and 103, creating a directory).

As per claim 2, same as claim arguments above and Beeler anticipates:
wherein copying comprises compressing at least a subset of the allocation units (paragraph 38, data being copied is compressed prior to transmission using a variety of compression algorithms).

As per claim 3 same as claim arguments above and Beeler anticipates:
wherein copying comprises: maintaining a record of a pre-imaging state of the file system (paragraph 26, lines 5-6 a database of files to be replicated is maintained on the source computer equates to maintaining a pre-imaging state); and

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copying only allocation units occupied by files included within the pre-imaging state of the file system (paragraph 26, lines 7-9, as copying only those files from the group considered critical).

As per claim 4 same as claim arguments above and Beeler anticipates: wherein adding comprises grouping within the locally-stored image file the copied allocation units for individual files of the file system (paragraph 79, data is replicated to the local file system) .

As per claim 5 Beeler same as claim arguments above and Beeler anticipates:

wherein copying comprises storing within the locally-stored image file one or more attributes related to each file, wherein the attributes are selected from the group consisting of ownership attributes, access-control attributes, timestamp attributes, archival attributes, indexing attributes, encryption attributes, and compression attributes (paragraph 91, lines 3-6 and Figure 25 Reference Number 254, file information, file ownership, permissions associated with the file are included in the replication) .

As per claim 9 Beeler same as claim arguments above and Beeler anticipates: further comprising protecting the locally-stored image file from accidental deletion or modification (paragraph 112, lines 23-27, providing a locking protocol for the locally stored image file (target server)).

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As per claim 10 same as claim arguments above and Beeler anticipates:

providing a filter driver that intercepts and denies requests to access the locally stored image file and initiating a process that opens and thereby locks the locally-stored image file (paragraph 112, line 12-paragraph 113, line 5, providing a locking protocol for the locally stored image file (target server).

As per independent claim 11 Beeler anticipates:

accessing a locally-stored image file within the partition, the locally-stored image file comprising a directory map and file data for a plurality of files (paragraph 20, 29, accessing all replicated data on the target server (locally-stored file);

initializing at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition (paragraph 101,103, requested operations include write file, create directory , change file attribute ect.);

extracting the file data into the initialized allocation units without disturbing the locally-stored image file(paragraph 101,103, requested operations include write file, create directory , change file attribute ect. and paragraph 91, replication set copied from the source to the target server (locally stored to the initialized);

creating a new directory area for the partition using the directory map (paragraph 29, 101, 103, create directory).

As per claim 12 Beeler anticipates:

wherein the directory map associates names for the plurality of files with corresponding portions of the file data, and wherein creating comprises generating a new directory area for the partition that associates the file names

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with the extracted file data (paragraph 20, 91, and Figure 25, Reference Number 254, directories and files are copied to a separate directory which would include a directory map to access to the files and 103, creating a directory).

As per claim 13 same as claim arguments above and Beeler anticipates:

wherein creating comprises adding an indication of the locally-stored image file to the new directory area (paragraph 103, create directory).

As per claim 14 same as claim arguments above and Beeler anticipates: wherein extracting comprises decompressing at least a subset of the file data (Figure 29 and paragraphs 38, decompress data).

As per claim 15 same as claim arguments above and Beeler anticipates:

wherein the directory map indicates at least one attribute for a file, and wherein creating comprises setting the at least one attribute for the file in the directory area, wherein the at least one attribute is selected from the group consisting of an ownership attribute, an access control attribute, a timestamp attribute, an archival attribute, an indexing attribute, an encryption attribute, and a compression attribute (paragraph 91, lines 3-6 and Figure 25 Reference Number 254, file information, file ownership, permissions associated with the file are included in the replication) .

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As per claim 19 same as claim arguments above and Beeler anticipates: further comprising protecting the locally-stored image file from accidental deletion(paragraph 112, lines 23-27, providing a locking protocol for the locally stored image file (target server)).

As per claim 20 same as claim arguments above and Beeler teaches: wherein protecting is selected from the group consisting of:
providing a filter driver that intercepts and denies requests to access the locally stored image file; and initiating a process that opens and thereby locks the locally-stored image file(paragraph 112, line 12-paragraph 113, line 5, providing a locking protocol for the locally stored image file (target server)).

As per claim 21 Beeler anticipates: An apparatus for imaging a file system in a partition comprising a plurality of allocation units, the apparatus comprising: a local imager to copy each allocation unit occupied by a file of the file system to a locally-stored image file, wherein the locally-stored image file is within the same partition as the file system; and wherein the local imager is to add a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system(paragraph 20, 79 as data replicated to a local file system of the source server and the replicated data is stored in a separate directory and paragraph 20, 91, and Figure 25, Reference

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Number 254, directories and files are copied to a separate directory which would include a directory map to access to the files, paragraph 103, create directory).

As per claim 22 same as claim arguments above and Beeler anticipates:

wherein the local imager is to compress at least a subset of the allocation units copied to the locally-stored image file(paragraph 38, data being copied is compressed prior to transmission using a variety of compression algorithms).

As per claim 23 same as claim arguments above and Beeler anticipates:

wherein the local imager is to maintain a record of a pre-imaging state of the file system and to copy only allocation units occupied by files included within the pre-imaging state of the file system(paragraph 26, lines 5-6 a database of files to be replicated is maintained on the source computer equates to maintaining a pre-imaging state and paragraph 26, lines 7-9, as copying only those files from the group considered critical).

As per claim 24, same as claim arguments above and Beeler anticipates:

wherein the local imager is to group within the locally-stored image file the copied allocation units for individual files of the file system (paragraph 79, data is replicated to the local file system) .

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As per claim 25 same as claim arguments above and Beeler anticipates:

wherein the local imager is to store within the locally-stored image file one or more attributes relating to at least one file of the file system, wherein the file attributes are selected from the group consisting of ownership attributes, access-control attributes, timestamp attributes, archival attributes, indexing attributes, encryption attributes, and compression attributes(paragraph 91, lines 3-6 and Figure 25 Reference Number 254, file information, file ownership, permissions associated with the file are included in the replication) .

As per claim 29 same as claim arguments above and Beeler anticipates: further comprising a protection component to prevent accidental deletion or modification of the locally-stored image file(paragraph 112, lines 23-27, providing a locking protocol for the locally stored image file (target server which equates to the locally stored image)).

As per claim 30 same as claim arguments above and Beeler anticipate:

wherein the protection component is selected from the group consisting of: a filter driver that intercepts and denies requests to access the locally-stored image file (paragraph 112, line 12-paragraph 113, line 5, providing a locking protocol for the locally stored image file (target server which equated to the locally stored image)).

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As per independent claim 31 Beeler anticipates:

an image locator to find a locally-stored image file within the partition, the locally-stored image file comprising a directory map and file data for a plurality of files (paragraph 20, 29, accessing all replicated data on the target server (locally-stored file);

a media formatter to initialize at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition paragraph 101,103, requested operations include write file, create directory , change file attribute etcetera.);

a data extractor to extract the file data into the initialized allocation units without disturbing the locally-stored image file(paragraph 101,103, requested operations include write file, create directory , change file attribute etcetera. and paragraph 91, replication set copied from the source to the target server (locally stored to the initialized); and a directory area builder to build a new directory area for the partition using the directory map paragraph 29, 101, 103, create directory).

As per claim 32 same as claim arguments above and Beeler anticipates:

wherein the directory map associates names for the plurality of files with corresponding portions of the file data, and wherein the directory area builder is to generate a new directory area for the partition that associates the file names with the extracted file data(paragraph 20, 91, and Figure 25, Reference Number 254, directories and files are copied to a separate directory which would include a directory map to access to the files and 103, creating a directory).

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As per claim 33 same as claim arguments above and Beeler anticipates:

wherein the directory area builder is to add an indication of the locally-stored image file to the new directory area (paragraph 103 create directory).

As per claim 34 same as claim arguments above and Beeler anticipates: wherein the data extractor is to decompress at least a subset of the file data (Figure 29 and paragraphs 38, decompress data).

As per claim 35 same as claim arguments above and Beeler anticipates: wherein the directory map indicates at least one attribute for a file, wherein the directory area builder is to set the at least one attribute of the file in the directory area, and wherein the at least one attribute is selected from the group consisting of an ownership attribute, an access control attribute, a timestamp attribute, an archival attribute, an indexing attribute, an encryption attribute, and a compression attribute (paragraph 91, lines 3-6 and Figure 25 Reference Number 254, file information, file ownership, permissions associated with the file are included in the replication) .

As per claim 39 same as claim arguments above and Beeler anticipates: further comprising a protection component to prevent accidental deletion of the locally-stored image file (paragraph 112, lines 23-27, providing a locking protocol for the locally stored image file (target server).

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As per claim 40 same as claim arguments above and Beeler anticipates:

wherein the protection component is selected from the group consisting of: a filter driver that intercepts and denies requests to access the locally-stored image file and a process that opens and thereby locks the locally-stored image file (paragraph 112, line 12-paragraph 113, line 5, providing a locking protocol for the locally stored image file (target server which equated to the locally stored image)).

As per independent claim 41 Beeler anticipates:

copying each allocation unit occupied by a file of the file system to a locally-stored image file, wherein the locally-stored image file is within the same partition as the file system (paragraph 20, 79 as data replicated to a local file system of the source server and the replicated data is stored in a separate directory); and adding a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system (paragraph 20, 91, and Figure 25, Reference Number 254, directories and files are copied to a separate directory which would include a directory map to access to the files);

accessing a locally-stored image file within the partition, the locally-stored image file comprising a directory map and file data for a plurality of files (paragraph 20, 29, accessing all replicated data on the target server (locally-stored file);

initializing at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition (paragraph 101, 103, requested operations include write file, create directory, change file attribute ect.);

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extracting the file data into the initialized allocation units without disturbing the locally-stored image file(paragraph 101,103, requested operations include write file, create directory , change file attribute ect. and paragraph 91, replication set copied from the source to the target server (locally stored to the initialized); creating a new directory area for the partition using the directory map (paragraph 29, 101, 103, create directory).

Claim 42 and 43 are rejected based on the same rationale as claim 1 and 11.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 16-17, 26-30, 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0083245 issued to Donald E. Beeler JR in view of US 2003/0221076 issued to Charles A. Milligan et al .

As per claim 6 same as claim arguments above and Beeler does not explicitly teach comprising marking a beginning point of the locally-stored image file to

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assist in locating the locally-stored image file in the event of directory area corruption. Milligan does teach this limitation at Figure 4, pointer to a track level where the record is stored to provide structure level points that are not fixed and can achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with marking a beginning point of the locally-stored image file to assist in locating the locally-stored image file in the event of directory area corruption to provide structure level points that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

As per claim 7 same as claim arguments above and Milligan teaches:

wherein marking comprises storing a unique beginning of-image marker at an initial allocation unit occupied by the locally-stored image file (Figure 4, Reference Number 450, pointer storage structure).

As per claim 8 same as claim arguments above and Milligan teaches:

wherein marking comprises storing at a predetermined area of the partition a location of an initial allocation unit occupied by the locally-stored image file (Figure 4, Reference Number 450, pointer storage structure).

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As per claim 16 same as claim arguments above and Beeler does not explicitly teach wherein accessing comprises searching for an allocation unit containing a unique beginning-of-image marker for the locally-stored image file. Milligan does teach this limitation (Figure 4, Reference Number 450, pointer storage structure points to the record (allocation unit)) to a track level where the record is stored to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with searching for an allocation unit containing a unique beginning-of-image marker for the locally-stored image file to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

As per claim 17 same as claim arguments above and Beeler does not explicitly teach wherein accessing comprises reading from a predetermined area of the partition a location of an initial allocation unit of the locally-stored image file. Milligan does teach this limitation at (Figure 4, Reference Number 450, pointer storage structure) to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with reading from a predetermined area of the partition a location of an initial allocation unit of the locally-stored image file to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

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As per claim 26 same as claim arguments above and Beeler does not explicitly teach comprising wherein the local imager is to mark a beginning point of the locally-stored image file to assist in locating the locally-stored image file in the event of directory area corruption. Milligan does teach this limitation at Figure 4, pointer to a track level where the record is stored to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with marking a beginning point of the locally-stored image file to assist in locating the locally-stored image file in the event of directory area corruption to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

As per claim 27 same as claim arguments above and Milligan teaches:
wherein the local imager is to mark the beginning point by storing a unique beginning-of-image marker at an initial allocation unit occupied by the locally-stored image file(Figure 4, Reference Number 450, pointer storage structure).

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As per claim 28 same as claim arguments above and Milligan teaches:

wherein the local imager is to mark the beginning point by storing at a predetermined area of the partition a location of an initial allocation unit occupied by the locally-stored image file(Figure 4, Reference Number 450, pointer storage structure).

As per claim 36 same as claim arguments above and Beeler does not explicitly teach wherein the image locator is to search for an allocation unit containing a unique beginning-of-image marker for the locally-stored image file. (Milligan does teach this limitation at Figure 4, Reference Number 450, pointer storage structure). to provide structure level pointes that are not fixed and can achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with beginning-of-image marker for the locally-stored image file to provide structure level pointes that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

As per claim 37 and Beeler does not explicitly teach ... a predetermined area of the partition a location of a first allocation unit of the locally-stored image file. Milligan does teach this limitation .at (Figure 4, Reference Number 450, pointer storage structure) to provide structure level pointes that are not fixed and can

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achieve fine granularity without requiring enormous number of pointers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beeler with ... a predetermined area of the partition a location of a first allocation unit of the locally-stored image file to provide structure level pointers that are not fixed and can achieve fine granularity without requiring enormous number of pointers (paragraph 11).

Claims 18, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0083245 issued to Donald E. Beeler JR in view of US 2002/0095616 issued to Jeffery S. Hastings.

As per claim 18 same as claim arguments above and Beeler does not explicitly teach further comprising defragmenting the locally-stored image file within the partition prior to extracting the file data. Hasting does teach this limitation at paragraph 46, lines 9-11, a file system should first be defragmented if corrupted) as a first-level solution. It would have been obvious to modify Beeler with defragmenting the locally-stored image file within the partition prior to extracting the file data as a first-level solution to a corrupt file system (paragraph 46, lines 11-12).

As per claim 38 same as claim arguments above and Beeler does not explicitly teach further comprising an image defragmenter to defragment the locally-stored image file within the partition before the data extractor extracts the file data. Hasting does teach this limitation at paragraph 46, lines 9-11, a

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file system should first be defragmented if corrupted) as a first-level solution. It would have been obvious to modify Beeler with an image defragmenter to defragment the locally-stored image file within the partition before the data extractor extracts the file data as a first-level solution to a corrupt file system (paragraph 46, lines 11-12).

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Contact Information


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Rayyan whose telephone number is (571) 272-1675. The examiner can normally be reached M-F: 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Susan Rayyan

December 23, 2006


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